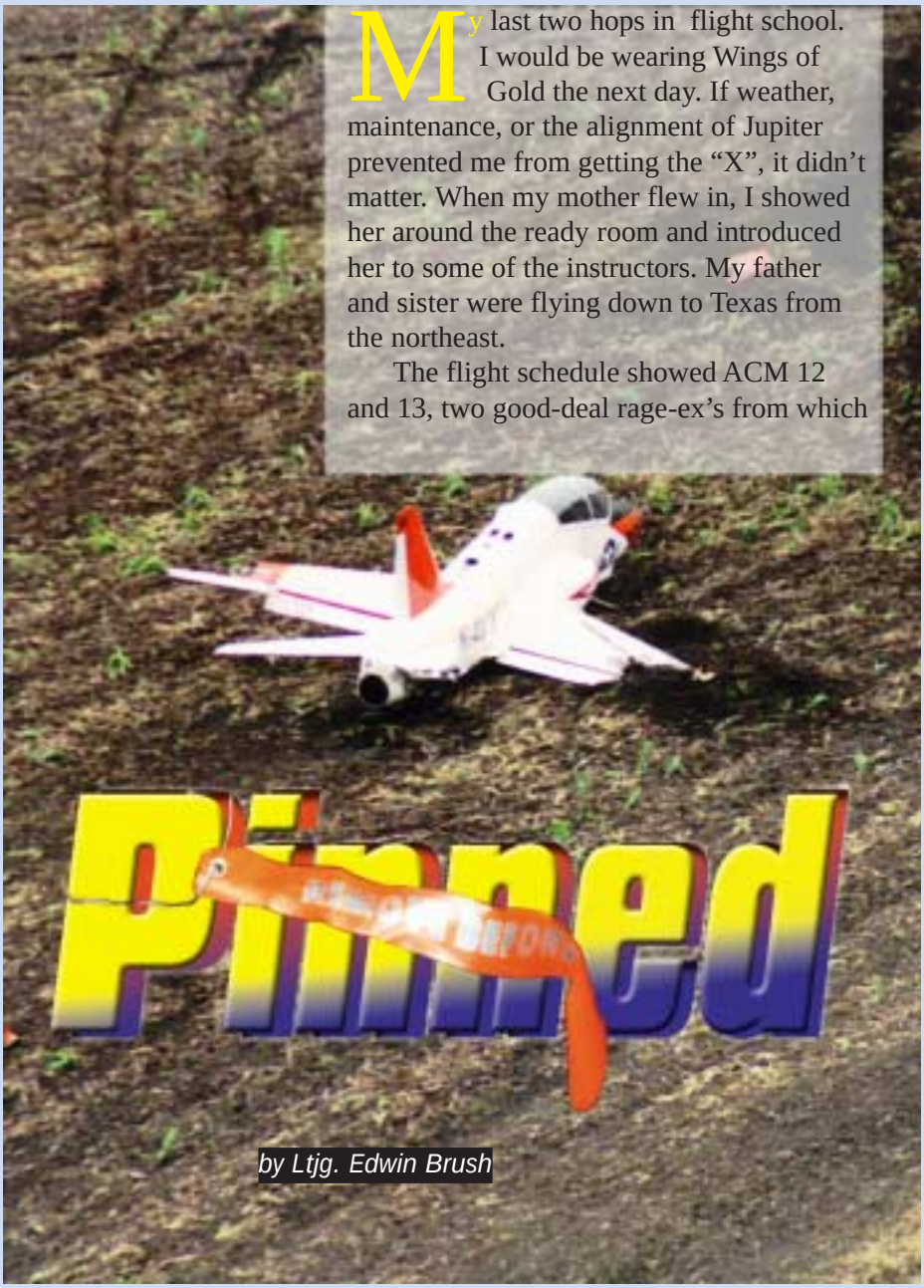

Pinned

by Ltjg. Edwin Brush

My last two hops in flight school. I would be wearing Wings of Gold the next day. If weather, maintenance, or the alignment of Jupiter prevented me from getting the "X", it didn't matter. When my mother flew in, I showed her around the ready room and introduced her to some of the instructors. My father and sister were flying down to Texas from the northeast.

The flight schedule showed ACM 12 and 13, two good-deal rage-ex's from which every student returned smiling from ear to ear. After the last flight would come the traditional dousing of water, then the icing on the cake when the CO or another available instructor rips off your student patch and gingerly places "soft wings" on your chest. The anticipation was incredible.

When I approached the jet for preflight, the plane captain was someone I had never seen. He seemed rushed and many of the pins were still in the jet, which was unusual. I was trying to approach the day slowly and more meticulously than usual. I wanted to be disciplined, take pride in my habit patterns and demonstrate all I had learned.

On my first takeoff out of Kingsville, I lined up on the runway as Dash 3. I watched as the lead and Dash 2 (flown by two instructors) let go of the brakes and sped off in section down the runway. I remember seeing the dried grass standing straight up along the edge of the runway and hearing the no-winds call from tower. Ten seconds later, I released my brakes and the plane accelerated.

As I tracked down the right side of the runway, everything felt normal. Suddenly, the aircraft swerved to the right, so I countered with rudder, making the aircraft swerve left centerline. A glance at airspeed showed the aircraft accelerating through 100 knots.

"I'm going flying," I thought. Though rotation speed was 120 knots, I believed it is much easier to go from 100 to 120 than 100 to zero.

After a few more lateral excursions, I got airborne. I came up with several reasons why the plane might swerve, including pilot-induced oscillation, weather or jet wash from my lead. I couldn't tell if there was truly a problem with my jet, so I said nothing. Besides, I needed to compartmentalize and fly a good rendezvous.

Our flight in the area went well. As we approached NALF Orange Grove, I felt a little doubt gnawing at my soul. I remember ATIS telling me there was no arresting gear on the active runway. No problem. If the jet swerved after touchdown, I'd simply take off again, set up for a downwind to the other runway and take a trap there. I still didn't say anything to the lead. After all, it was way too late to tell him now, because his first question would be, "Why didn't you tell me sooner?"

My lead landed and rolled out on his side of the runway. I touched down, expecting the worst, ready to move the throttles to military thrust. Ever suspicious as I slowed through

100 knots, I was ready for the worst, but nothing happened. As I cleared the runway, I tried to set up the cockpit for the next flight and stay ahead of the game. I dismissed the takeoff as something I must have caused.

We debriefed over breakfast and briefed for the next flight, where I would be the fighter lead. Yet another missed chance to tell the instructors about my first takeoff. I walked out to the jet, preflighted, strapped in, started up, ran through my takeoff checks, and taxied out to the hold-short.

This time, I was Dash 2 of the section takeoff. I was on the right and lead was on the left. Dash 3 held at the hold short. Again, no winds. I remember the lead's signal to run up the engines. We both went to military thrust. When his arm fell beneath the canopy rail in a karate chop, we released the brakes and started the takeoff roll.

I looked down the front of his wingline (the formation-bearing line) staying in position by pulling a little power off, anticipating my jet having more power than his. I glanced down the runway a few times to check drift, but my primary scan was the bearing line.

Many things happened faster than it takes to read this paragraph. I felt a side-to-side motion like a car taking a corner. There was a quick movement away from lead and another one even more pronounced back toward him. My perspective on the lead's jet changed. It wasn't off my left shoulder anymore but much farther forward on my canopy. The jet felt fast as I pulled back on the stick. Take off! Get away or over them. I remember seeing the instructor in the back seat of lead's jet looking up and ducking as I flew above him, I lost sight of him as lead's plane passed under the nose of my jet. I felt a thud and saw the lead's plane disappear to the left out of sight.

I was in the air, but it wasn't going to be for long. I felt like I was sitting much too far back in the seat and the angle of attack was way too high. Adverse-yaw departure coming. Get out now. I pulled the handle with both hands, looking right down at the handle (that would have been good for my neck). The next instant, the jet was on its side, still airborne, but in a steep bank. I heard, "Eject! Eject! Eject!" over the radio. It vindicated my thought process. I looked down at the handle as the jet somehow touched down upright. I didn't feel it land in the soft mud, but I did feel it accelerating along in the dirt, and I yanked the throttle off. I tried to keep it tracking straight through the mud.

This time, I tilted my head up and pulled the ejection handle. Still nothing. The aircraft began to slow considerably, yet it still swerved one more time. This time, a wingtip dug in, and I actually was looking up at dirt blow by the canopy. Later, I heard the jet was actually inverted flying backward for an instant.

The jet cartwheeled, coming to rest upright, pointed right back to the place where I had begun my takeoff roll, except it was now several hundred feet off the left side of the runway. I jumped out of the jet as quickly as possible and ran toward the other jet, wondering if I had just killed two people, not quite believing what had happened.

The aircrew in the other jet were fine, and the other aircraft sustained only Class C damage.

The aircrew in the other jet were fine, and the other aircraft sustained only Class C damage. We all miraculously walked away without a scratch. I had pulled the ejection handle twice, hard. I should have ejected

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parallel to the ground the first time in a horrible body position. The second time, I pulled harder, in a good body position, with wings level, and still nothing happened. The ejection-seat safety pin had never been removed.

When I had climbed into the cockpit in Kingsville, the HUD cover and MDC (mild detonating cord) safety pin had been removed, so I never bothered to look down between my legs. SOP in Kingsville (now changed) had been for plane captains to remove those three items, and for the pilot to be responsible for making sure. I'm thoroughly convinced I would be dead had my first ejection been "successful." Somebody's oversight, rushed procedures, a lack of experience and my own inattention on preflight saved my life.

Aircrew need to trust their judgement. Follow up on maintenance actions to ensure problems are corrected.

Interviews with pilots from previous flights in the jet revealed that several had aborted takeoffs in the aircraft because of an unusual shimmy, but only two people had written anything up on the jet. The T-45 is notoriously squirrelly on the runway, which served to mask the problem and convince many people, including me, that the problem was pilot and not machine. The investigation revealed that the nosewheel steering failed at a high speed and collision occurred at 108 knots. My foot was standing on the opposite rudder trying to steer away from the collision to no avail. The board judged I was given a jet with problems, which I didn't have the experience to handle. The result was the loss of a $20-million jet.

Communication is paramount in this business. If something feels even a little wrong, you need to talk about it with other aircrew and maintainers. Do not doubt your own judgement. If something feels wrong, it is. Aircrew need to be more specific about aircraft discrepancies, and discuss the details surrounding the problem, and freely express the danger if left uncorrected.

Aircrew need to trust their judgement. Follow up on maintenance actions to ensure problems are corrected. While difficult in a place with as many jets as Kingsville, it's still a good skill to learn as a student naval aviator, because you will follow up on maintenance all the time in the fleet.

If you abort a takeoff, or even think about it, it's probably a strong clue your jet has problems. This applies to any flight control or any system. Aborting never seemed to be a good option in the split-second I had to decide, not even with hindsight. By that point, my sight picture of lead was ugly enough, and it was too late.

It would have been a good decision to tell the lead immediately of my problem after my first takeoff. As a student, I feared criticism might follow if nothing was found. I also felt an instructor would have asked, "Well, is it serious?" And I would have truthfully replied, "I don't know."

There are shades of gray and potentially fatal mistakes made in every aviator's career. In retrospect, I wish I had erred to caution. If you don't down the aircraft for yourself, do it for the guy after you.

Sometimes something you do say can be as dangerous as something you don't say. The aircrew of the jet at the hold-short saw my plight and told me to eject. An absolutely correct call for a student, and it did give me a warm fuzzy. The aircrew in the lead jet, however, which I had hit and pushed off the runway, were trying to control their plane. With their jet slowing and upright, they talked quickly in the cockpit and stuck with it, but they were

tempted to punch out when they heard that call.

Ejection commands need to be made when the time comes, but they need to be prefaced with a callsign or a description to prevent inadvertent, needless, and possibly deadly, ejections.

Although it might seem otherwise, getting the "X" wasn't the issue for me. I knew I would be wearing wings the next day regardless of whether or not I flew that day. However, outside distractions and changes in my normal routine could have contributed to my own lapses now so evident. Family and friends coming to town, ensuring my choker was ready, wondering where I was going in the fleet, the rush of ceremony, water buckets, impending life changes and pride could have kept me from focusing exclusively on the business at hand.

A few changes came out of my accident. Jets with the same lot nosewheel were modified to correct the problem I had encountered. Also, pilots now pull the pins in the cockpit of the T-45. The pins are connected by a wire, making them pilot-proof. It's the people who ride the ejection seat who should pull the pins. Small changes have saved lives in the past.

My own inattention to detail taught me to preach attention to detail. Focus and concentrate on every aspect of every flight. When the hair stands up on the back of your neck, it's time to pay attention, no matter how inexperienced you are. Ask someone with more experience and talk to maintenance. Though it's rare that a plane will paint you into a corner and fail so suddenly, if it does, you'd better know immediate action items cold because you won't have time to think, only time to react.

I soon made my final two flights. That day, my mother pinned on my Wings of Gold.

Ltjg. Brush flies with VFA-147.